

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

First Named

Inventor : Max Donath et al.

Appln. No.: 09/618,613

Filed : July 18, 2000

For : MOBILITY ASSIST DEVICE

Docket No.: U11.12-0137

Appeal No.

Group Art Unit: 2673

Examiner: Leonard
Shapiro

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TRANSMITTAL OF APPEAL BRIEF
(PATENT APPLICATION - 37 C.F.R. § 192)

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10 DAY OF October, 2003.


PATENT ATTORNEY

Transmitted herewith in triplicate is the Appeal Brief in
this application with respect to the Notice of Appeal filed on
August 18, 2003.

FEE STATUS

[x] Small entity status under 37 C.F.R. §§ 1.9 and 1.27
is established by a verified statement previously filed on November
8, 2000.

FEE FOR FILING APPEAL BRIEF

Pursuant to 37 C.F.R. 1.17(c) the fee for filing the
Appeal Brief is \$165.00.

The Director is authorized to charge any additional fees
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Respectfully submitted,

WESTMAN, CHAMPLIN & KELLY, P.A.

By: 

Brian D. Kaul, Reg. No. 41,885
Suite 1600 - International Centre
900 Second Avenue South
Minneapolis, Minnesota 55402-3319
Phone: (612) 334-3222 Fax: (612) 334-3312

BDK/djb



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BRIEF FOR APPELLANT

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10⁷⁴ DAY OF October 2003.

BDR
PATENT ATTORNEY

This is an appeal from an Office Action dated April 16, 2003, which finally rejected claims 1 and 16-21.

REAL PARTY IN INTEREST

The University of Minnesota, a corporation organized under the laws of the state of Minnesota, and having offices at 450 University Gateway, 200 Oak Street, Minneapolis, MN 55455 has acquired the entire right, title and interest in and to the invention, the application, and any and all patents to be obtained therefor, as set forth in the Assignment, which was filed with the United States Patent and Trademark Office September 17, 2003. A copy of the Assignment is provided in the Appendix to this document.

RELATED APPEALS AND INTERFERENCES

There are no known related appeals or interferences that will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

STATUS OF THE CLAIMS

Claims 1 and 16-21 are pending in the application. Claims 5, 24 and 49 have been rejoined to the application. Claims 2-4, 6-15, 22, 23 and 25-48 have been withdrawn from consideration. Claims 1 and 16-21 have been finally rejected. Appellant is appealing the final rejections of claims 1 and 16-21.

STATUS OF AMENDMENTS

An amendment canceling claims 25-48 was filed June 13, 2003 in response to the Final Office Action, but was not entered by the Examiner as stated in the Advisory Action mailed June 15, 2003.

SUMMARY OF THE INVENTION

The present application is directed to a display (such as 22) on a mobile body (such as 124) of stored objects in a conformal manner. The stored objects correspond to object information contained in a data storage system (such as database 16). The "stored objects" correspond to real world stationary landmarks and objects, such as road elements (e.g., lane boundaries, lane barriers, lane stripes, etc.), street signs, and other landmarks [page 4, lines 16-19]. The "object information contained in a data storage system" defines the precise geographic locations of the landmarks corresponding to the stored objects [page 8, lines 12-18; page 10, lines 12-28]. Accordingly, the "stored objects" are different from sensed objects that are detected by radar or other means [page 11, line 16 through page 12, line 4; FIG. 3F]. The term "conformal" means that the displayed or "virtual" images of the stored objects are presented by the display in a fashion such that they are substantially aligned with the real world objects that would be seen by a user having an unobstructed field of view [page 29, lines 10-16].

FIG. 3E provides an example of such a conformal

display. In FIG. 3E stored objects, corresponding to right, left and center lane boundary object information contained in a data storage system, are displayed on the display as bright lines (such as shown in FIG. 3D) that are superimposed over the corresponding real world right, left, and center lane boundaries of the road on which the vehicle is traveling.

ISSUES

Whether claims 1 and 16-21 are unpatentable over Groves et al. (U.S. Patent No. 5,414,439) in view of Lemelson et al. (U.S. Patent No. 6,226,389 B1) under 35 U.S.C. §103(a)

GROUPING OF CLAIMS

Group I: Claim 1 and 16-21 stand or fall together.

ARGUMENT

Group I: Claims 1 and 16-21

In the final Office Action, claims 1 and 16-21 were rejected under 35 U.S.C. §103(a) as being unpatentable over Groves et al. in view of Lemelson et al. Appellant respectfully disputes the rejections.

Groves et al. utilize an infrared camera to capture images of animals and other warm real world objects that are directly in front of the vehicle. The images are displayed to a user in real time. Groves et al. suggest that the captured images could be superimposed on the real image. [Col. 3, lines 56-58, FIG. 5] However, as acknowledged by the Examiner, Groves et al. fail to disclose the displaying of stored objects, or a data storage system containing object information corresponding to the stored objects. More importantly, Groves et al. fail to disclose displaying such stored objects in a conformal manner. #1

The Examiner found Lemelson et al. to teach a display of stored objects corresponding to object information contained in a data storage system, at FIG. 1, items 11-13; and col. 15, line 45 through col. 16, line 10. The cited portion of Lemelson et al. relates to a navigational display that provides information to the user, such as maps and the location and direction of travel [col. 15, lines 45-66]. Lemelson et al. also disclose the storage of "trip or travel data" in memories 12 and 13 [col. 16, lines 1-5]. Additionally, Lemelson et al. disclose the display of map graphics based upon vehicle instant location data [col. 16, lines 5-10].

Appellant respectfully disputes the Examiner's conclusion that the combination of Groves et al. and Lemelson et al. form the invention described in claim 1, and submits that the Examiner has failed to establish a *prima facie* case of obviousness against the claim. The Examiner has failed to establish a *prima facie* case of obviousness with respect to independent claim 1, since there is no suggestion or motivation, outside of Appellant's disclosure, to combine the cited references. The examiner found the combination to be desired "in order to display stored objects to warn the driver of hazardous conditions during driving by operating a display" and cites col. 2, lines 23-24 of the SUMMARY OF THE INVENTION of Lemelson et al. as support therefore. However, the cited passage corresponds to a range sensing system of Lemelson et al., and is unrelated to the cited "stored objects" of trip/travel data and map graphics. col. 15
line 45
Nowhere in Lemelson et al. is there any suggestion that the trip/travel data or the map graphics, could be used to provide a warning to the driver of hazardous conditions. Accordingly, Appellant submits that Examiner has failed to provide any motivation or suggestion for combining the stored trip/travel data or map graphics of Lemelson et al. with the display of Groves et al. outside of Appellant's disclosure. #2

Appellant asserts that, in this case, there must be some motivation or suggestion not only to modify Groves et al. to include a data storage system containing the object information corresponding to the stored objects, but also some suggestion or motivation to display those stored objects in a conformal manner. "Whether the changes from the prior art are 'minor', . . . the changes must be evaluated in terms of the whole invention, including whether the prior art provides any teaching or suggestion to one of ordinary skill in the art to make the changes that would produce the patentee's . . . device." *Northern Telecom, Inc. v. Datapoint Corp.*, 908 F.2d 931, 935, 15 USPQ2d 1321, 1324 (Fed. Cir.), cert. denied, 498 U.S. 920 (1990). This includes what could be characterized as simple changes, as in *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984) (Although a prior art device could have been turned upside down, that did not make the modification obvious unless the prior art fairly suggested the desirability of turning the device upside down.)

Appellant submits that there is no motivation or suggestion to display the "stored objects" cited in Lemelson et al. in a conformal manner. Such a conformal display of the map graphics would require, at a minimum, a live satellite image of the vicinity of the traveling vehicle, over which the map graphics could be superimposed. Nowhere in Lemelson et al. or Groves et al. is there any suggestion or motivation of displaying the map graphics in a conformal manner. Additionally, to provide such a conformal display of the map graphics, the map graphics would have to be very accurate. In other words, it would be necessary for the map graphics to have a precision of approximately less than a quarter of a meter in order to even roughly align the map with the real world view or image. However, graphical maps of the type described in Lemelson et al. are much too inaccurate (accuracy on the order of 20 to 25 meters) to be

displayed in such a conformal manner with a real world view or image. Likewise, there is no suggestion or motivation of providing a conformal display of the trip/travel data or any other "stored object" of Lemelson et al. In fact, there is no mention in Lemelson et al. that the trip/travel data corresponds to any type of real world object to which it could be displayed in a conformal manner.

Additionally, Appellant believes that the Examiner has failed to establish a *prima facie* case of obviousness against claim 1, since the cited references fail to teach or suggest all of the limitations of the claim. Neither Groves et al. nor Lemelson et al. teach or suggest the "stored objects" that correspond to "object information contained in a data storage system" as described in claim 1. Most importantly, neither Groves et al. nor Lemelson et al. teach or suggest a conformal display of the stored objects since, as explained above, there is no teaching or suggestion of displaying the trip/travel data or map graphics of Lemelson et al. in a conformal manner.

Accordingly, Appellant submits that the Examiner has failed to establish a *prima facie* case of obviousness against claim 1. Therefore, Appellant believes that the cited references do not render claim 1 obvious. Appellant further believes that claims 17-21 are allowable since they each contain additional elements or limitations beyond allowable base claim 1, from which they depend.

CONCLUSION

For the reasons discussed above, Appellant submits that claims 1 and 16-21 are allowable over the cited references. As such, Appellant respectfully requests that claims 1 and 16-21 be allowed. Additionally, Appellant believes that claims 2-15, 22-24, and 49 are allowable as being dependent from allowable generic claim 1, and requests that the withdrawn claims be rejoined to the present application and allowed.

Respectfully submitted,

WESTMAN, CHAMPLIN & KELLY, P.A.

By: 

Brian D. Kaul, Reg. No. 41,885
Suite 1600 - International Centre
900 Second Avenue South
Minneapolis, Minnesota 55402-3319
Phone: (612) 334-3222 Fax: (612) 334-3312

BDK/djb

Appendix A

Copy of Assignment which was filed with the United States Patent and Trademark Office September 17, 2003.

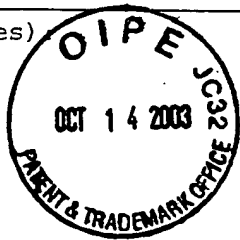
PATENT RECORDATION FORM
COVER SHEET

Attorney Docket No.
U11.12-0137

To the Director of the U.S. Patent and Trademark Office: Please record the attached original document or copy thereof.

1. Name of conveying party(ies)

- (1) Max Donath
- (2) Craig R. Shankwitz
- (3) Heon Min Lim
- (4) Bryan Newstrom
- (5) Alec Gorjestani
- (6) Sameer Pardhy
- (7) Lee Alexander
- (8) Pi-Ming Cheng



Additional name(s) of conveying party(ies)
attached? ☐ Yes ☒ No

.. Nature of Conveyance:

- ☒ Assignment ☐ Merger
- ☐ Security Agreement
- ☐ Change of Name ☐ Other _____

Execution Date: October 30, 2000

A. Application No. (s)

09/618,613

If this document is being filed together with a
new application, the execution date(s) of the
declaration of the application is: ---

Additional numbers attached? ☐ Yes ☒ No

Name and address of party to whom corres-
pondence concerning document should be mailed:

Name: Brian D. Kaul
Street Address: Westman, Champlin & Kelly, P.A
Suite 1600
International Centre
900 Second Avenue South
City: Minneapolis State: MN ZIP 55402

2. Name and address of receiving
party(ies):

Name: University of Minnesota
Internal Address: _____
Street Address: 450 University Gateway,
200 Oak Street
City: Minneapolis State: MN ZIP
55455

Additional name(s) & address(es) attached?
☐ Yes ☐ No

4B. Patent No. (s)

Additional numbers attached?
☐ Yes ☒ No

6. Total number of applications and
patents involved: [1]

7. Total fee (37 CFR 3.41):\$ 40.00

8. Method of Payment

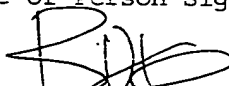
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I, the undersigned, declare that to the best of my knowledge and belief, the foregoing information is true and correct and any
attached copy is a true copy of the original document.

Brian D. Kaul
Name of Person Signing


Signature

9-17-2003
Date

Total number of pages submitted: [4]

ASSIGNMENT

Attorney Docket No.

U11.12-0137

WHEREAS, we, Max Donath, Craig R. Shankwitz, Heon Min Lim, Bryan Newstrom, Alec Gorjestani, Sameer Pardy, Lee Alexander and Pi-Ming Cheng, (hereinafter referred to as ASSIGNORS), having post office addresses of 4200 Sunset Blvd., St. Louis Park, MN 55416; 3113 Humbolt Avenue South, Minneapolis, MN 55455; 1241 Gibbs Avenue, St. Paul, MN 55108; 11496 Meadow Lane, Blaine, MN 55449; 2211 Girard Avenue South, Minneapolis, MN 55408; 414 7th Avenue SE, #B106, Minneapolis, MN 55414; 3065 Camelot Drive, Woodbury, MN 55125, 2829 Hillscourte, Roseville, MN 55113 are the inventors of an invention entitled Mobility Assist Device for Letters Patent of the United States, the application having been executed on even date herewith, and/or being identifiable in the United States Patent and Trademark Office by Application No. 09/618,613, filed July 18, 2000; and

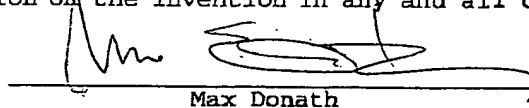
WHEREAS, The University of Minnesota, a corporation organized and existing under the laws of the State of Minnesota, and having offices at 450 University Gateway, 200 Oak Street, Minneapolis, MN 55455, ("Assignee") is desirous of acquiring the entire right, title and interest in and to the invention, the application, and any and all Letters Patent or similar legal protection, foreign or domestic, to be obtained therefor;

NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, I transfer to Assignee, its successors and assigns, my entire right, title and interest in and to the invention, the above-identified application, corresponding domestic and foreign applications, all Letters Patent or similar legal protection issuing thereon, and all rights and benefits under any applicable treaty or convention; and I authorize the Director of the United States Patent and Trademark Office or foreign equivalent thereof to issue the Letters Patent or similar legal protection to the Assignee.

I authorize the Assignee, its successors and assigns, to insert in this instrument the filing date and serial number of the application when ascertained.

I authorize the Assignee, its successors and assigns, or anyone it may properly designate, to apply for Letters Patent or similar legal protection, in its own name if desired, in any and all foreign countries.

I represent to the Assignee, its successors and assigns, that I have not and shall not execute any writing or do any act whatsoever conflicting with this Assignment. I, my executors or administrators, will at any time upon request, without additional consideration, but at the expense of the Assignee, its successors and assigns, execute such additional writings and do such additional acts as the Assignee, its successors and assigns, may deem desirable to perfect its enjoyment of this grant, and render all assistance in making application for and obtaining, maintaining, and enforcing the Letters Patent or similar legal protection on the invention in any and all countries.

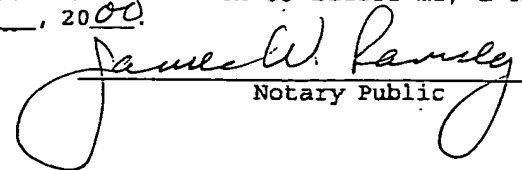

Max Donath

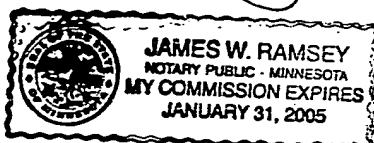
STATE OF MINNESOTA)

COUNTY OF Heaven ss.

of October, 2000, Subscribed and sworn to before me, a Notary Public, this 30 day

(SEAL)


Notary Public



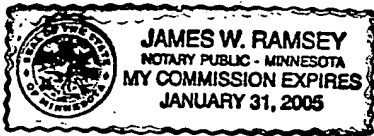
C R Shankwitz
 Craig R. Shankwitz

STATE OF MINNESOTA)
 COUNTY OF Hennepin ss.

Subscribed and sworn to before me, a Notary Public, this 30 day
 of October, 2000.

James W. Ramsey
 Notary Public

(SEAL)



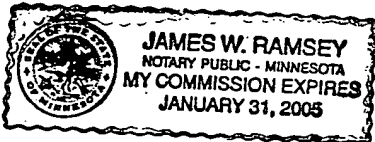
Heon Min Lim
 Heon Min Lim

STATE OF MINNESOTA)
 COUNTY OF Hennepin ss.

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James W. Ramsey
 Notary Public

(SEAL)



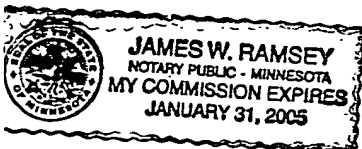
Bryan Newstrom
 Bryan Newstrom

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 COUNTY OF Hennepin ss.

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James W. Ramsey
 Notary Public

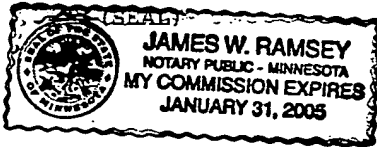
(SEAL)



Alec Gorjestani
Alec Gorjestani

STATE OF MINNESOTA)
COUNTY OF Hennepin ss.

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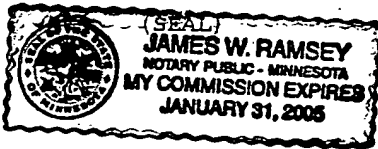


James W. Ramsey
Notary Public

Sameer Pardy
SAMEER PARDHY

STATE OF MINNESOTA)
COUNTY OF Hennepin ss.

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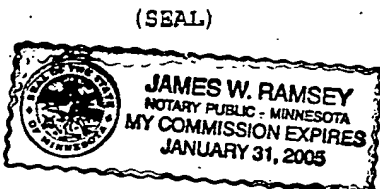


James W. Ramsey
Notary Public

Lee Alexander
Lee Alexander

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COUNTY OF Hennepin ss.

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James W. Ramsey
Notary Public

P. Meng Cheng

Pi-Meng Cheng

Pi-Ming Cheng

STATE OF MINNESOTA)

COUNTY OF Hennepin ss.

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of October, 2002.

(SEAL)

James W. Ramsey
Notary Public

